

No. 11, No. 804 of E. Hall's Texas collection, is thus named by Munro.

No. 13 is represented in the Philadelphia Academy collection from Baldwin. It has since been collected by Mr. Curtiss and appears to be a good species.

No. 14, No. 807 of E. Hall's Texas collection, named by Munro.

No. 15 is No. 364 of Drummond's collection, and is also in Herb. Gray from Key West, collected by Blodgett.

No. 19 is in Herb. Gray, ticketed by Munro from a specimen collected in Texas by Mr. Reverchon. It is, perhaps, the same as No. 20, which we have from Virginia and South Carolina, and appears very different from *P. virgatum*, Linn.

No. 21 is 801 of E. Hall's Texas collection. It occurs also from other sources.

No. 24 is the plant of Chapman's Flora, but his synonym should probably be excluded. Doell cites *Milium paspaloides*, Ell., *Digitaria paspaloides*, Michx., and *Milium distichum*, Muhl., as synonyms of *P. vaginatum*, Swz. It is nearly related to No. 23, but would seem to be specifically distinct. The *P. obtusifolium* of Chapman's Supplement is *P. platycaule*, Poir. *P. obtusifolium*, Raddi, and *P. barbatum*, Schultes, are both made synonyms of *P. furcatum*, Flugge, by Doell in Gram Bras., and it is possible that Chapman's *P. Digitaria* may also be that species.

A Botanical Holiday in Nova Scotia. IV.

BY T. J. W. BURGESS, M. D.

Twenty-six miles in the little steamer May Queen over another branch of the great inland sea, and we had reached mountain locked Whycocomagh, or, as it is generally called by the natives Hogomah. The greater part of the three days spent here was devoted to drying purposes, but a couple of very successful excursions were made. One up a rocky gorge in the mountains rewarded us with *Impatiens pallida*, Nutt., *Solidago thyrsoides*, E. Meyer, *Milium effusum*, L., *Asplenium thelypteroides*, Mx., and two very peculiar forms of *Cystopteris fragilis*, Bernh. The first of these forms, found growing abundantly under the spray of a little fall, in deeply shaded crevices of the rock, fell under the var. *dentata*, Hook., and was remarkable for the great length of

the fronds. Their general measurement was not less than eleven or twelve inches, but many of them were fifteen and sixteen, and some even nineteen inches long. The second form, gathered in another part of the same ravine, occupied the crevices of drier and but slightly shaded rocks, and approached the var. *angustata*, but the ends of the fronds, as well as of most of the pinnæ and some of the primales, showed a tendency to bifurcate. The forking was not confined to a single plant, but was common to all in the patch, which was of considerable extent. Prof. Eaton, to whom specimens were submitted, says that this form is unlike any that he has seen before, and suggests that it be called var. *multifida*, Wollleston, as Mr. Moore in his "Nature Printed British Ferns" has such a variety and says of it, "In this, which is not permanent, the apices of the pinnæ or of the frond are bifid or multifid, or the stipes divided." Excursion number two had for its object the climbing of Salt Mountain, from the summit of which we had a splendid view. The Bras D'Or with its myriad of radiating arms was spread before us like a network of silver threads, while Cape Porcupine, at the Gut of Canso, on the one hand, and the smoke rising from Sydney mine on the other, with all the country between, were quite readily discernible. The side of the mountain, very steep and partially wooded, was a grand conservatory for ferns, which were disposed in regular series with the boundaries of each quite sharply defined. *Aspidium marginale*, Swz., growing with which was *Asplenium Filix-foemina*, Bernh. var. *angustum*, D. C. Eaton, formed the lowest layer, and was succeeded by one of *Aspidium spinulosum*, Swz. var. *dilatatum*, Hook., while a magnificent growth of *Aspidium Filix-mas*, Swz. came next, and *Woodsia Ilvensis*, R. Br. occupied the exposed faces of the topmost rocks. The fronds of the male fern, many of which were fully three feet in length, differed from the form usually described in being rather narrowly lanceolate in outline, the tallest of them measuring only five inches across where broadest.

The time fixed for the Professor's leaving me to visit the Island of Anticosti was drawing speedily onward, and it became necessary for us to hasten back to Pictou where we knew several rarities were to be had. Flying glimpses were taken of Pirate's Harbor and New Glasgow, *Campanula rapunculoides*, L. being seen growing plentifully along the railway track at the latter place, and on the evening of July 24th we had arrived. The early part of the next day was devoted to an examination of the ballast heaps along the quays, and *Senebiera Coronopus*, Poir.,

Viola tricolor, L., *Trifolium arvense*, L., *Vicia tetrasperma*, Loisel., *Carduus nutans*, L., *Polygonum lapathifolium*, Ait., *Mercurialis annua*, L., and a number of other introduced plants, not yet determined, were our prizes. Noon, however, came all too surely bringing the sundering of our very pleasant, and to me, instructive, two months' companionship; Mr. Macoun starting for Quebec where he was to catch the Government steamer, whilst I, having determined to work my way home by the White Mountains, remained over for a couple of days botanizing with Mr. McKay, Principal of the Pictou Academy, and an enthusiastic naturalist. In tramping about the vicinity *Senecio Jacobæa*, L., was found to be one of the commonest weeds, its golden heads brightening the fields and roadsides in every direction. It is locally known as "Stinking Willie," and the eating of it was at one time popularly believed to be the cause of a disease prevalent among the cattle about Pictou for the past forty years. Experiment, however, abundantly disproved this, and by proper sanitary precautions the disease has been just about stamped out. Plentiful, but not quite so much so as the *Jacobæa*, was *Senecio viscosus*, L., and *Matricaria inodora*, L. was not infrequent. *Bartsia Odontites*, Huds., just coming into flower, was poking its head up everywhere, while *Camelina sativa*, Crantz, and *Euphorbia Peplus*, L. were detected bordering some of the streets.

Leaving Pictou, a stop, long enough for a farewell visit to the falls, was made at Truro, which place was quitted on the 27th July for St. John, New Brunswick, on the road for my western home again.

The results of our work in Nova Scotia may be thus summed up. The names and locations of over 700 phænogams and vascular cryptogams were recorded, and specimens of most of them preserved. Of these, over 200 had not, so far as I am aware, been given in any published list of the Nova Scotia flora. Of the flowering plants, the orders to which, as mentioned by Dr. Sommers, an able Halifax botanist, in his "Introduction to a Synopsis of the Flora of Nova Scotia," least attention had been paid by local workers, the *Cyperaceæ* and *Gramineæ*, furnished, in proportion, by far the greater part of the additions, the number being 66 of the former and 34 of the latter. *Compositæ* came next, claiming 15, while *Cruciferae* and *Juncaceæ* each had 8, and the remainder were scattered amongst the other orders. In vascular Cryptogams, the *Filices* having been very exhaustively studied by the Rev. E. Ball, our new finds were limited to *Boeltrychium matricariæ folium*, *Asplenium Felix-fœmina*, var. *angust-*

um, and *Isoetes Tuckermanni*. Of the *Musci*, *Hepaticæ*, and *Lichenes* the bulk have still to be worked up, so that it is impossible as yet to give an anyway accurate report of the total number of species found or additions made.

Elihu Hall.

BY MRS. J. M. MILLIGAN.

For want of sufficient data the publication of this brief tribute has been delayed.

Mr. Hall was born June, 1822, in Patrick county, Virginia, and died September, 1882. As a young man Mr. Hall was strong, healthy and full of ambition. In the winter of 1846, by severe over-exertion, he brought on an almost fatal hemorrhage from the lungs, and during the following years of his life he was subject to hemorrhages whenever his physical strength was over-taxed. This weakened condition of his body induced him to seek out-door recreation, not only as a means of obtaining such moderate share of health as might be his, but to find occupation for his active mind. He knew nothing of text-books, had never attended school, or had any scholarly associates, but

“Nature, the old nurse, took
The child upon her knee,
Saying, ‘Here is a story book
Thy Father has written for thee.’”

And the “child” turned the leaves with an industrious hand and read many things about the bird, insect and plant life around him. With enthusiasm he noted every plant within his reach, made himself familiar with the characteristics of each species, and soon learned to classify them according to their general resemblances. He had never heard of drying plants to preserve them for specimens. In order that others might see what he had seen, he set to work with patient diligence to learn to draw and color each species as he gathered it fresh from the fields. Naturally his first attempts were crude and stiff, but his progress was rapid, for he copied only from the works of the Great Master, and he was armed with a sturdy determination to succeed. Colored drawings of three hundred and fifty species of plants were the result of his first summer’s work, besides a number of well-executed drawings of birds, also colored. Mr. Hall was not long in discovering that others must have gone over at